

**Claims**

1. A screen, characterized by comprising:  
an optical multilayer film on a base, said optical  
5 multilayer film being comprised of  $(2n+1)$  layers (where  $n$   
is an integer of 1 or more), which have a high reflection  
property with respect to light in a specific wavelength  
region and a high transmission property with respect to  
at least visible light in wavelength regions other than  
10 said specific wavelength region;  
wherein said optical multilayer film is formed by  
coating.
2. The screen according to claim 1, characterized in  
15 that said base is transparent and said optical multilayer  
film is formed on both surfaces of said base by coating.
3. The screen according to claim 1, characterized in  
that said optical multilayer film comprises a stacked  
20 structure in which a first optical film having a high  
refractive index and a second optical film having a lower  
refractive index than that of said first optical film are  
alternately stacked on one another and the outermost  
layer of said optical multilayer film is formed by said  
25 first optical film.
4. The screen according to claim 3, characterized in  
that said first optical film is a film containing metal  
oxide fine particles, a dispersant, and a binder; and  
30 said second optical film is a film containing fluorine-  
containing resin or  $\text{SiO}_2$  fine particles.

5. The screen according to claim 4, characterized in that said metal oxide fine particles are  $TiO_2$  or  $ZrO_2$  fine particles.

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6. The screen according to claim 3, characterized in that said specific wavelength region includes wavelength regions of red, green, and blue.

10 7. The screen according to claim 1, characterized by comprising a light absorbing layer for absorbing light which has transmitted through said optical multilayer film.

15 8. The screen according to claim 1, characterized by comprising a light diffusion layer for diffusing light reflected by said optical multilayer film, on the outermost layer of said optical multilayer film.

20 9. A method for producing a screen including an optical multilayer film on a base, said optical multilayer film being comprised of  $(2n+1)$  layers (where  $n$  is an integer of 1 or more), which have a high reflection property with respect to light in a specific wavelength region and a high transmission property with respect to at least visible light in wavelength regions other than said specific wavelength region; wherein a production process for producing said optical multilayer film comprises:

25 30 a first coating step for forming by coating a first optical film having a high refractive index;

a second coating step for forming by coating a second optical film having a lower refractive index than that of said first optical film; and

5 said first coating step and said second coating step are alternately conducted.

10. A method for producing a screen including optical multilayer films on both surfaces of a transparent base, each optical multilayer film being comprised of  $(2n+1)$  layers (where  $n$  is an integer of 1 or more), which have a high reflection property with respect to light in a specific wavelength region and a high transmission property with respect to at least visible light in wavelength region other than said specific wavelength

15 region; wherein

a production process for producing said optical multilayer films comprises:

20 a first coating step for forming by dipping a first optical film having a high refractive index, on both surfaces of a base to be coated;

a second coating step for forming by dipping a second optical film having a lower refractive index than that of said first optical film, on said both surfaces of a base to be coated; and

25 said first coating step and said second coating step are alternately conducted.

11. The method for producing a screen according to claim 10, characterized by comprising:

30 a step for forming a light absorbing layer for absorbing light which has transmitted through said

optical multilayer film, on the outermost layer of one side of said optical multilayer film.

12. The method for producing a screen according to  
5 claim 11, characterized by comprising:

a step for forming a light diffusion layer for diffusing light reflected by said optical multilayer film, on the outermost layer of the other side of said optical multilayer film.